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## PROPOSED COAL MINING AND COAL-BED METHANE DEVELOPMENT THREATEN AQUATIC RESOURCES IN THE TRANSBOUNDARY FLATHEAD ECOSYSTEM

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The Transboundary Flathead River basin in Montana (USA) and British Columbia (Canada) hosts one of the most diverse and unique aquatic ecosystems throughout North America. Migratory bull trout (*Salvelinus confluentus*) and non-hybridized westslope cutthroat trout (*Oncorhynchus clarkii lewisi*) migrate from Flathead Lake upstream to the Canadian headwaters to spawn and rear, representing some of the last remaining strongholds in the basin. However, proposed open-pit coal mining and coalbed methane (CBM) drilling in the Canadian headwaters threaten water quality, invertebrate communities, and migratory fish populations downstream to Glacier National Park (GNP) and Flathead Lake. In response to these threats, a multi-agency, long-term research and monitoring program was initiated in 2005 to examine water and sediment chemistry, contaminant levels, aquatic habitat, and the distribution and genetic diversity of native fishes. Comparative data collected in the neighboring Elk River drainage, a system impacted by coal mining and CBM development, show increased nutrients and heavy metal concentrations in the water and lower invertebrate species richness than the Flathead. In 2008, basin-wide fisheries surveys were initiated and data were collected at 119 sites in Canada and GNP. Native fishes were found throughout much of the system, including proposed mining locations. Additionally, the highest quantity of bull trout redds in the system was detected immediately downstream of proposed mine sites. Continuation of these collaborative investigations will provide necessary baseline data to inform conservation and management decisions impacting this diverse and sensitive transboundary system.